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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/735,730

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Moo Yeol Park

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EXAMINER

HINES, ANNE M

ART UNIT

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2879

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07/09/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/735,730	Applicant(s) PARK ET AL.	
	Examiner ANNE M. HINES	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16, 19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/124,709.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The amendment filed on April 4, 2008, has been entered and acknowledged by the Examiner.

Claims 1-16 and 19-20 are pending in the instant application.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-16 and 19-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, in independent claim 1, the phrase “of a line type” is indefinite. The addition of the word “type” to an otherwise definite expression (in this case ‘line’) extends the scope of the expression so as to render it indefinite. See MPEP 2173.05(b) E. The Examiner has treated the claims on their merits assuming that the claims require the UV sealant to have a straight edge. Appropriate correction is required.

Further in claim 1, the phrase “the masking regions are points” is indefinite. It is not clear what Applicant is claiming since a point is an abstract, one-dimensional mathematic concept and the masked regions disclosed in the instant Application are at least a two-dimensional projection on a three-dimensional object. Based on the Drawings of the instant Application, the Examiner has treated the claims on their merits

assuming that the phrase intends to claim the masked regions as a plurality of separated regions. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-16 and 19-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Majima (US 5724110) (of record).

Regarding claim 1, Majima discloses a method for fabricating a liquid crystal display panel, including: forming a closed pattern of a UV sealant (Fig. 7, 3; Fig. 6, 17; Fig. 3, 15; column 7, lines 32-34; column 6, lines 1-19 and lines 56-60) on a first substrate (Fig. 6, 1; column 7, lines 1-4; photocurable means cured using light, the examiner interprets this to include light in the ultraviolet wavelength); dropping a plurality of droplets of liquid crystal (Fig. 3, 15; column 6, lines 1-19 and lines 56-60) on a second substrate (Fig. 3, 1'; column 6, lines 56-60), wherein the forming the UV sealant and the dropping the liquid crystal are separated (Note that the closed pattern of UV sealant is not formed until after the mask and UV light are applied thereon, thus separating the steps of dropping the liquid crystal and forming the UV sealant pattern); attaching the first and second substrates (Fig. 4; column 6, lines 56-60); hardening the UV sealant other than the UV sealant on the regions where the UV sealant and at least

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one scribing line are crossed (Fig. 6, 14; column 7, lines 1-11; Fig. 7, 3 and 5; column 7, lines 23-35; the photo-mask causes the sealant to migrate to the areas exposed to the UV radiation, therefore the region 5 is not cured) by irradiating a UV ray on the attached substrates (column 7, lines 12-15 metal halide lamps produce light in the ultraviolet wavelength range) with masking regions (Fig. 6, 14; column 7, lines 1-11) where the UV sealant and at least one scribing line are crossed (Fig. 4, 15; column 6, lines 56-60; the UV sealant is initially on the entire substrate); wherein the masked regions are a plurality of separated regions where the UV sealant with a straight edge and at least one scribing line are crossed and the masked regions of the sealant are not cured (Fig. 7, 3 and 5; column 6, lines 1-19; the sealant migrates to only areas where light is irradiated upon the substrate; column 7, lines 23-35, there is not curable compound in the scribing regions, 5) and cutting the bonded substrates into a plurality of unit cells (column 7, lines 36-38).

Regarding 2, Majima further discloses that the masking regions in the irradiating a UV ray on the attached substrates includes masking upper and lower side portions of the crossed regions between the UV sealant and the scribing line (see Fig. 6, item 14; column 7, lines 1-11; the mask covers the region of the scribing lines).

Regarding claim 4, Majima further discloses that the masking regions in the irradiating a UV ray on the attached substrates includes masking an active region (see Fig. 6, item 4, item 14; column 7, lines 1-11; the only areas that are irradiated are the areas where the sealant is to be formed, which is not the active region) in addition to masking upper and lower side portions of the crossed regions between the UV sealant

and the scribing lines (see Fig. 7, items 3 and 5; column 7, lines 23-34; the mask will be on the right and left side of the seal line to form the seal, the examiner interprets the left and right side of the seal line as above and below the seal line in the horizontal direction).

Regarding claims 3 and 5, Majima further discloses that the masking regions in the irradiating a UV ray on the attached substrates includes masking left and right side portions of the Crossed regions between the UV sealant and the scribing lines (see Fig. 6, item 14; column 7, lines 1-11; the mask covers the region of the scribing lines).

Regarding claim 6, Majima further discloses that the UV sealant surrounds the plurality of the unit cells (see Fig. 7, item 3; column 7, lines 22-35).

Regarding claim 7, Majima further discloses masking an active region inside the main sealant (see Fig. 6, item 16; column 7, lines 1-11).

Regarding claim 8, Majima further discloses that the UV sealant (see Fig. 7, item 3; column 7, lines 22-35) forms at an outside of the main sealant (see Fig. 7, item 4; column 7, lines 22-35).

Regarding claim 9, Majima further discloses wherein the UV sealant includes one of monomer and oligomer each having both ends coupled to an acrylic group (column 5, lines 40-44).

Regarding claim 10, Majima further discloses that the main UV sealant includes one of monomer and oligomer each having one end coupled to an acrylic group and the other end coupled to an epoxy group (column 5, lines 40-61; a cycloaryl group can be an epoxy).

Regarding claim 11, Majima further discloses that the UV sealant includes one of monomer and oligomer each having both ends coupled to an acrylic group (column 5, lines 40-44).

Regarding claim 12, Majima further discloses that the main UV sealant includes one of monomer and oligomer each having one end coupled to an acrylic group and the other end coupled to an epoxy group (column 5, lines 40-61; a cycloaryl group can be an epoxy).

Regarding claim 13, Majima further discloses heating the UV ray irradiated substrates with masking crossed regions between the UV sealant and the scribing lines (see Fig. 6, item 14; column 6, lines 1-19; the irradiation of the substrate will also heat the substrate), wherein the UV sealant includes one of monomer and oligomer each having one end coupled to an acrylic group and the other end coupled to an epoxy group (column 5, lines 40-61; a cycloaryl group can be an epoxy).

Regarding claim 14, Majima further discloses that the scribing line is formed on the bonded substrates (see Fig. 7, items 5 and 6; column 7, lines 23- 26).

Regarding claim 15, Majima further discloses that the cutting the bonded substrates into a plurality of unit cells is performed by scribing and breaking simultaneously (column 7, lines 36-38, dicing will simultaneously scribe and break the substrates).

Regarding claim 16, Majima further discloses including forming at least one column spacer on the first substrate (see Fig. 6, item 17; column 6, lines 1-19; the column spacer is formed from the sealing material and is joined to both As to claim 18,

Majima disclose the method of claim 1. Majima further discloses that the UV sealant is formed on the first substrate (see Fig. 5, item 15; column 6, lines 61-67; the UV sealant is formed to be injected between the two substrates), and the plurality of droplets of liquid crystal is dropped onto the second substrate (see Fig. 5, item 15; column 6, lines 56-67; the liquid crystal is dropped between the two substrates and is therefore formed on the second substrate).

Regarding claim 19, Majima further discloses wherein dropping a plurality of droplets of liquid crystal includes dropping at least one droplet of liquid crystal onto each of the plurality of unit cells (see Fig. 10, item 10; column 8, lines 55-63; the injection hole in each cell allows for droplets to be dropped into each individual cell).

Regarding claim 20, Majima further discloses that the hardening includes hardening all the UV sealant other than the UV sealant on the regions where the UV sealant and at least one scribing line are crossed (see Fig. 6, item 14; column 7, lines 1-11; see Fig. 7, items 3 and 5; column 7, lines 23-35; the photo-mask causes the sealant to migrate to the areas exposed to the UV radiation, therefore the region 5 is not cured).

Response to Arguments

Applicant's arguments filed April 4, 2008 have been fully considered but they are not persuasive.

With regard to claim 1, Applicant argues that the claim 1 phrase "wherein the forming the UV sealant and the dropping the liquid crystal are separated" is not

disclosed by the Majima reference because the liquid crystal and sealant materials of Majima are mixed and then dropped onto the substrate.

The Examiner respectfully disagrees. The claim language does not eliminate Majima as an anticipatory prior art reference for claim 1 because the phrase "wherein the forming the UV sealant", which derives its antecedent basis from the claim 1 phrase "forming a closed pattern of UV sealant on the first substrate" does not require that the liquid crystal and sealant materials be placed on the substrate separately, but rather, that the step of forming the closed pattern of UV sealant and the step of dropping the liquid crystal material onto the substrate be separate. This is the case in the Majima reference because the closed pattern of UV sealant is not formed until the mixture of liquid crystal and sealant materials is irradiated by UV light, after the liquid crystal material has been dropped onto the first substrate. Therefore, the rejection of claim 1 over Majima is maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne M. Hines whose telephone number is (571) 272-2285. The examiner can normally be reached on Monday through Friday from 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Anne M Hines/
Patent Examiner
Art Unit 2879

/NIMESHKUMAR D. PATEL/
Supervisory Patent Examiner, Art Unit 2879

Application Number 	Application/Control No.	Applicant(s)/Patent under Reexamination	
	10/735,730	PARK ET AL.	
	Examiner	Art Unit	
	ANNE M. HINES	2879	